

WHAT IS CLAIMED IS:

1. A distributed file system (DFS) comprising:  
a plurality of DFS servers connected to a network, for distributing a file for storage; and  
a gateway unit for converting a protocol for accessing a centralized file system into a protocol capable of accessing the distributed file to access the distributed file;

wherein at least one of the DFS servers is provided with the gateway unit.

2. The distributed file system according to claim 1, wherein the gateway unit creates a request for the distributed file system from a request for the centralized file system, thereby accessing the distributed file system, and creates a result of the request for the centralized file system from a result of the request for the distributed file system, using the protocol for the centralized file system.

3. The distributed file system according to claim 1, wherein the gateway unit receives the request for making access in the centralized file system having a directory structure and accesses the distributed file system not having the directory structure, a file in the centralized file system being identified by a location of a directory in which the file resides and a unique file name in the directory, while the file in the distributed file system being identified by an identifier uniquely assigned in the distributed file

system irrespective of a location of the file.

4. The distributed file system according to claim 3, wherein the gateway unit has the directory structure used in the centralized system and determines the identifier for the file from a table storing the identifier in a location of the file name in the directory in the directory structure.

5. The distributed file system according to claim 1, wherein the gateway unit receives a request for making update access in the centralized file system in which a once-written file can be updated, and fulfills the request by creating a new generation file and writing updating contents to the new generation file in the distributed file system in which a once-written file can not be updated.

6. The distributed file system according to claim 5, wherein the gateway unit makes access to search for a latest generation file in the distributed file system in response to a request for file referencing.

7. The distributed file system according to claim 5, wherein the gateway unit sequentially receives a file update request comprising a plurality of fragments on a fragment-by-fragment basis, writes contents of modification to a file of one generation, recognizes completion of all the fragments of the file update request, thereby completing creation of the file of the one generation.

8. A distributed file system (DFS) comprising:  
a plurality of DFS servers connected to a network, for distributing a file for storage; and  
a gateway unit for converting a protocol for accessing a centralized file system into a protocol capable of accessing the distributed file to access the distributed file,

wherein at least one of said at least one DFS client is provided with the gateway unit.

9. A distributed file system (DFS) server connected to a network, comprising:

a DFS processing unit for processing a request from a DFS client, received over the network;  
and

a gateway unit for receiving a request using a protocol for accessing a file in a centralized file system over the network, converting the received request into a request using a protocol capable of accessing a file in the DFS, and then transmitting the converted request to the DFS processing unit.

10. The distributed file system server according to claim 9, wherein the gateway unit creates a result of the request for the centralized network file system from a result of the request for the distributed file system, using the protocol for the centralized file system.

11. The distributed file system server according to claim 9, wherein the gateway unit receives the

request for making access in the centralized file system having a directory structure and accesses the distributed file system not having the directory structure, the file in the centralized file system being identified by a location of a directory in which the file resides and a unique file name in the directory, while the file in the distributed file system being identified by an identifier uniquely assigned in the distributed file system irrespective of a location of the file.

12. The distributed file system server according to claim 11, wherein the gateway unit has the directory structure used in the centralized system and determines the identifier for the file from a table storing the identifier in a location of the file name in the directory in the directory structure.

13. The distributed file system server according to claim 9, wherein the gateway unit receives a request for making update access in the centralized file system in which a once-written file can be updated, and fulfills the request by creating a new generation file and writing updating contents to the new generation file in the distributed file system in which a once-written file can not be updated.

14. The distributed file system server according to claim 13, wherein the gateway unit makes access to search for a latest generation file in the distributed file system in response to a request for file

referencing.

15. The distributed file system server according to claim 13, wherein the gateway unit sequentially receives a file update request comprising a plurality of fragments on a fragment-by-fragment basis, writes contents of modification to a file of one generation, recognizes completion of all the fragments of the file update request, thereby completing creation of the file of the one generation.

16. A method for accessing a file in a distributed file system (DFS) comprising the steps of:

receiving a request using a protocol for accessing a file in a centralized file system over a network;

converting the received request into a request using a protocol capable of accessing the file in the DFS; and

performing processing on the file in the DFS using the converted request.

17. The method for accessing the distributed file system according to claim 16, further comprising the step of:

creating a result of the request for the centralized network system from a result of the request for the distributed file system, using the protocol for the centralized file system.

18. The method for accessing the distributed file system according to claim 16, wherein the step of

converting the received request comprises:

converting the request for making access in the centralized file system having a directory structure into the request for accessing the distributed file system not having the directory structure, the file in the centralized file system being identified by a location of a directory in which the file resides and a unique file name in the directory, while the file in the distributed file system being identified by an identifier uniquely assigned in the distributed file system irrespective of a location of the file.

19. The method for accessing the distributed file system according to claim 18, wherein the step of converting the received request further comprises the step of:

determining the identifier for the file from a table storing the identifier in a location of the file name in the directory in the directory structure.

20. The method for accessing the distributed file system according to claim 16, wherein the step of receiving the request comprises:

receiving the request for making access in the centralized file system in which a once-written file can be updated; and

the step of converting the received request includes the step of:

creating a new generation file and writing updating contents of the file to the new generation

file in the distributed file system in which the once-written file cannot be updated.

21. The method for accessing the distributed file system according to claim 20, wherein the step of converting the received request includes the step of:

making access to search for a latest generation file in the distributed file system in response to a request for file referencing.

22. A processing program for accessing a distributed file system using a protocol for accessing a centralized file system, the processing program comprising the steps of:

converting information with a directory structure for identifying a file by a location of a directory in which the file resides and a unique file name in the directory into an identifier without a directory structure uniquely assigned irrespective of a location of the file, when the file is referred to;

accessing the file using the identifier; and

returning data read out for referencing as a response.

23. A processing program for accessing a distributed file system using a protocol for accessing a centralized file system, the processing program comprising the steps of:

determining whether updating of a file is to update data being already updated when the updating of the file is performed;

- 40 -

obtaining an identifier for the file when the updating of the file is determined to be not to update the data being already updated;

registering file data being updated; and

accessing the file using the identifier and requesting data writing.